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The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
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C-A OPERATIONS PROCEDURES MANUAL

12.55 Radiation Without Interlock Response

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Hand Processed Changes

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Approved: _____ ***Signature on File*** _____
Collider-Accelerator Department Chairman Date

C. Carlson

12.55 Radiation Without Interlock Response

1. Purpose

The purpose of this procedure is to define the sequence of activities required to respond to a Radiation Without Interlock condition.

2. Responsibilities

It is the responsibility of the person or persons executing this procedure to observe all safety rules.

3. Prerequisites

The person or persons executing this procedure shall have all formal training required of a TVDG Operator.

4. Precautions

None.

5. Procedure

5.1 Radiation Without Interlock (RWI) Responses

- 5.1.1 A chime will sound in the control room at the Radiation Safety System Display Panel.
- 5.1.2 A red light will come on in the 'Machine Stoppage' or 'Beam Stoppage' areas of the Radiation Safety System Display Panel. This will indicate the location of the cause and the system's response to the RWI condition.
- 5.1.3 RWI in Target Room 1 will cause the HE and Image Faraday cups of MP-6 to be inserted. RWI in Target Rooms 2 and/or 4 will insert the MP-7 HE and Image Faraday cups.
- 5.1.4 RWI in the Accelerator Room inserts the appropriate LE and HE Faraday cups, shuts down the Preaccel Power Supply, Pelletron Motor(s) and the Charging System(s). If MP6/3-Stage is the area of RWI, the MP6 Terminal Ion Source Inflector will also run down.

5.2 **Action to be Taken in the Event of an RWI**

5.2.1 The Operator in Charge (OIC) will dispatch an operator to search the appropriate area to determine the reason for the RWI.

5.2.2 The Operator will reset the zone according to procedure.

5.2.3 The operator will report the results to the OIC.

5.2.4 If no reason has been discovered for this event the OIC shall make the following announcement over the PA system "A radiation without interlock indication has been received in the Control Room. Would the person responsible for this event please call the Control Room at extension 4584."

5.2.5 The OIC shall notify the Emergency Coordinator or the Designated Alternate Coordinator of the event. See [C-A-OPM 12.5 "Emergency Notification List"](#) for the names and phone numbers of personnel to contact.

5.2.6 The operator will note this event in the Operations Log Book.

5.3 **After the Event is Over**

5.3.1 The OIC shall record this event in the Radiation Safety Log book.

5.3.2 The OIC shall clear the response and initiate the start up of the accelerator(s).

5.3.3 Notification and/or reporting of this event shall be done in accordance with [C-A-OPM 10.1](#) and BNL Occupational Health and Safety Guide, [Section 1.1.0 - Occurrence Reporting System](#).

6. **Documentation**

None

7. **References**

7.1 [C-A-OPM 12.5 "Emergency Notification List"](#).

7.2 [BNL Occupational Health and Safety Guide, Section 1.10 – Occurrence Reporting System](#).

7.3 [C-A-OPM 10.1 "Occurrence Reporting System and Processing of Operations Information"](#).

8. **Attachments**

None